

May 16, 1984 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

178605



Bayonne Barrel and Drum RCRA Sampling Results (NJD009871401)

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On February 17, 1984 a RCRA sampling survey was conducted at Bayonne Barrel and Drum by Joseph Cosentino, Karen Egnot, Steven Hale, Brian Kovak and myself. This survey was conducted at the request of the Waste and Toxic Substances Branch to determine if any actions were taken by Bayonne Barrel and Drum in order to comply with the complaint and compliance order issued May 20, 1982.

The facility located at 150 Raymond Boulevard in Newark, New Jersey was formerly in the business of cleaning and reconditioning dirty and damaged drums. The facility encompasses an area of approximately 20 acres. At the time of the inspection, operations had ceased and the company had filed for bankruptcy.

Drum cleaning operations formerly involved both closed head and open head drums. In closed head cleaning, chains and a caustic solution were used to wash out previous material in the drums. The spent solution drained through an oil-water separator into a 5,000 gallon underground holding/settling tank and was then pumped into a 60,000 gallon above ground holding/settling tank. The liquid was decanted to the sewer under a permit to the Passaic Valley Sewage Commission. Open head drums were placed on a conveyor belt and moved through an incinerator which burned residue out of the inside. This residue material was collected in two subsurface holding/settling tanks. Approximately 40,000 lbs of incinerator ash and sludge was generated monthly.

Samples were taken from the following areas of concern:

1) Under ground 5,000 gallon holding/settling tank

Sampling #65189 - aqueous sample collected from the tank.
Sampling #65190 - composite soil sample collected from the area around the tank.

2) Oil/Water Separator

Sample #65188 - aqueous sample collected from oil separator trench.

3) Subsurface tank near incinerator

Sample #65191 - aqueous sample collected from the subsurface tank.

Sample #65192 - composite soil sample near subsurface tank.

4) Incinerator ash waste pile

Sample #65184 - composite sample taken from ash pile

Sample #65185 - " " " " " "

Sample #65186 - " " " " " "

Sample #65187 - composite soil sample taken around ash pile

Sampling equipment and containers were prepared according to EPA standard procedures prior to sampling. A total of nine (9) samples were taken, three (3) aqueous, three (3) soil, and three (3) from the ash pile.

Aqueous samples were analyzed for RCRA characteristics (ignitability and corrosivity) and non-volatile (NVOA) and purgeable (POA) organic priority pollutants. Soil and ash samples were analyzed for the characteristics of EP toxicity (metals, herbicides and pesticides) as defined in RCRA, as well as metal analysis, and priority pollutants (NVOA, POA). All analyses were performed in EPA's Edison, New Jersey laboratory. EPA standard procedures were followed for the collection of samples throughout the survey.

Sample results are given in Tables I thru VI. Results indicate that all samples contained a number of organic compounds. In the incinerator ash waste pile, EP toxicity limits for metals were exceeded for both cadmium and lead. Also, the metals scan showed high levels of heavy metal contamination in all ash and soil samples.

In addition to the above analysis, PCB's in measurable quantities were detected in sample #65187, soil by ash pile.

Attachments:

Figure I - Map of Facilities Grounds

Figure II - Sample Location Map

Tables I-VI - Analytical Results

Appendix I - Photographs

Appendix II - Receipt of Samples

Figure I - Map of Facility Grounds

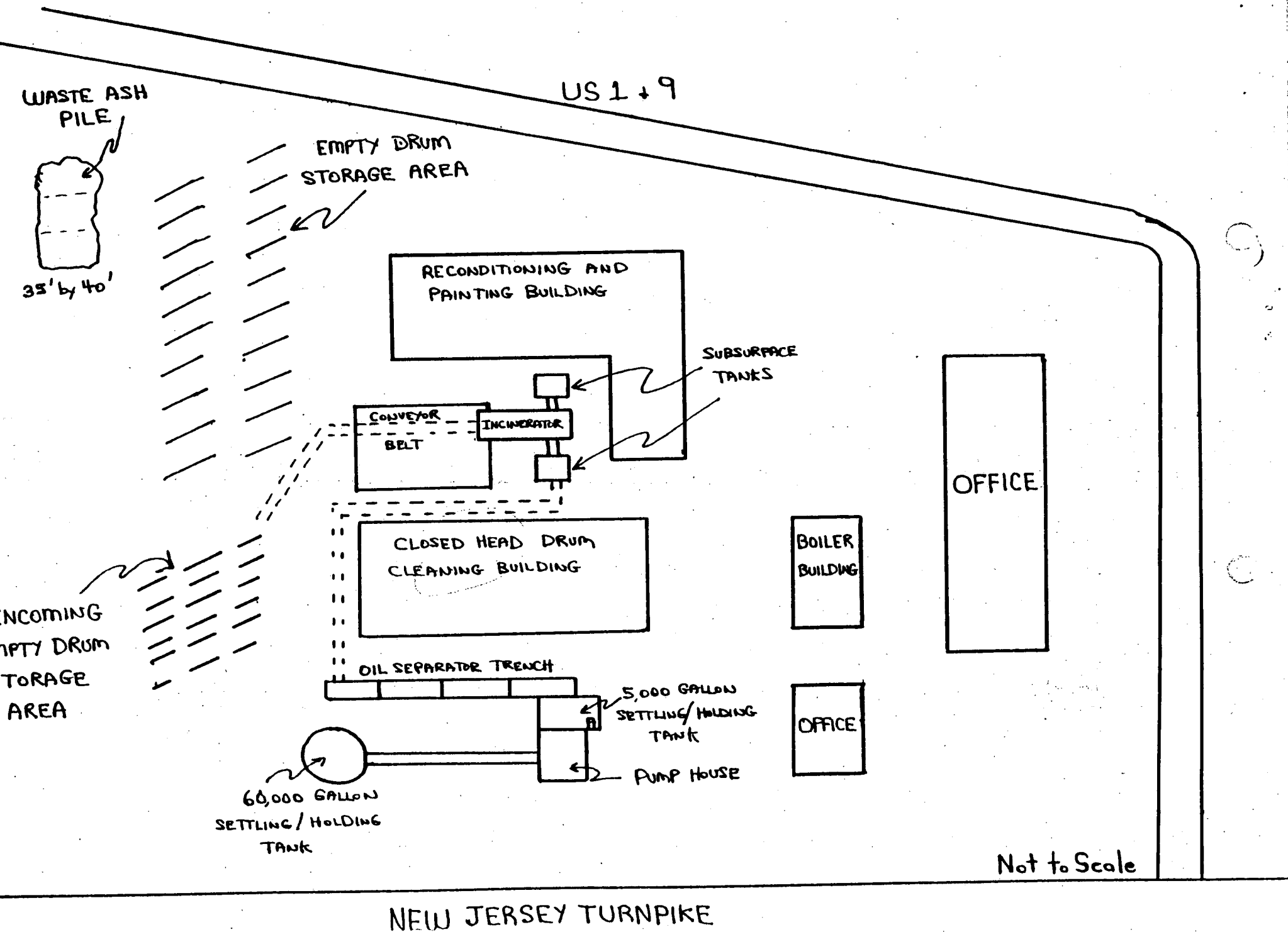


Figure II - Sample Location Map

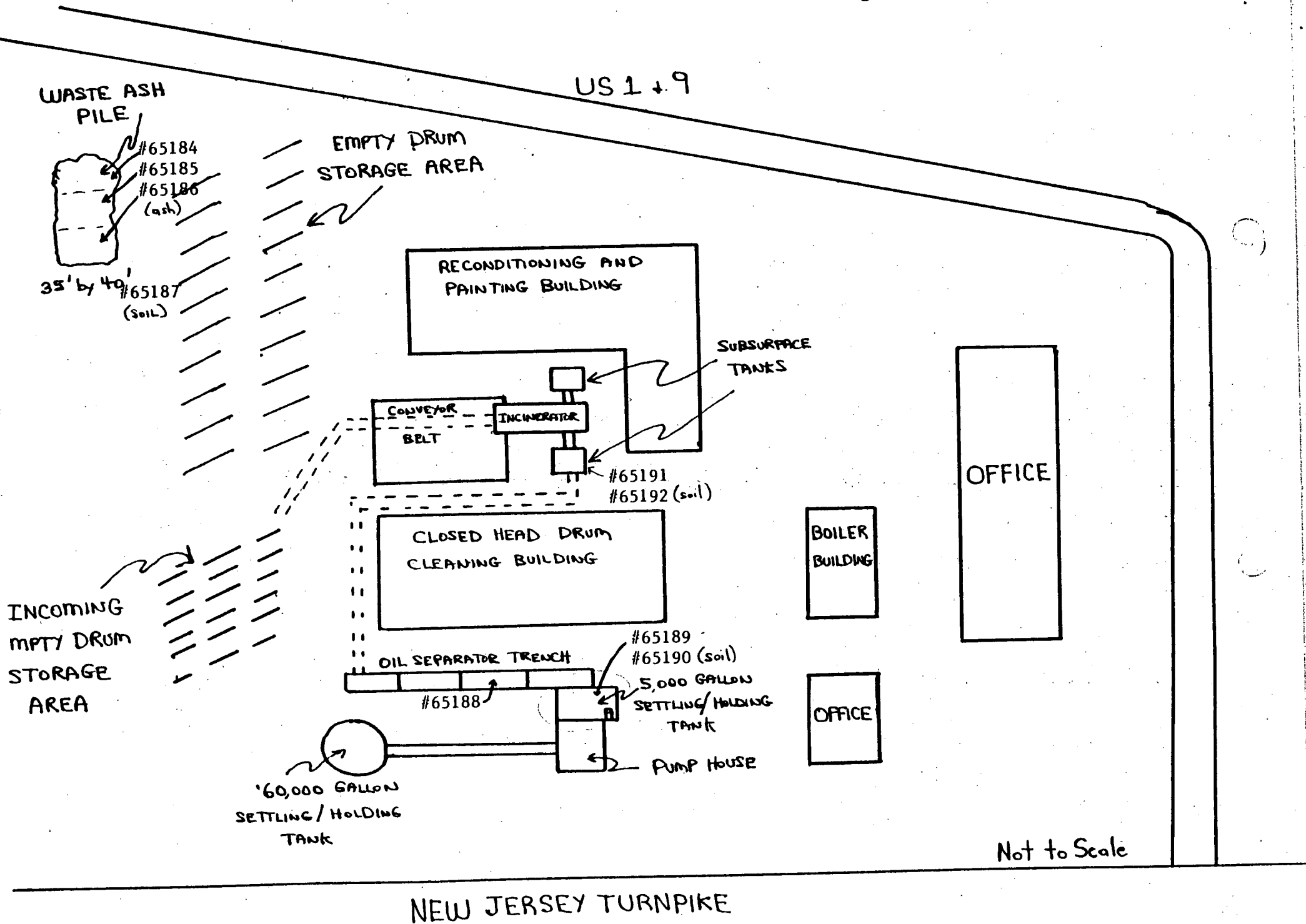


Table I

Comparison of Waste Analysis to Characteristics of Corrosivity
and Ignitability

Parameter	Maximum Allowable Limit	65188	65189	65191
Ignitability	> 140°F	> 140°F	> 140°F	> 140°F
Corrosivity	> 2.5 S.U.	*	*	6.93 S.U.

S.U. - Standard Units

65188 - Oil Separator

65189 - 5000 Gallon Tank

65191 - Subsurface Tank by Incinerator

* - No Analysis Performed

Table II

Comparison of Sample Analysis to Characteristic of EP Toxicity

Parameter	Maximum Concentration for EP Toxicity mg/l	65184 mg/l	65185 mg/l	65186 mg/l	65187 mg/l	65191 mg/l	65192 mg/l
Arsenic	5.0	.02K	.02K	.02K	.02K	.02K	.02K
Barium	100.0	4.0	5.3	1.3	1.5	.16	1.7
Cadmium	1.0	.99	1.2	.17	.08	.002K	.04
Chromium	5.0	.02J	.01J	.04	.008K	.02J	.08J
Lead	5.0	7.6	10.0	2.4	.25	.04	.10
Mercury	0.2	.0002K	.0002K	.0002K	.001	.0002K	.0002K
Selenium	1.0	.008K	.02J	.008K	.008K	.009J	.008K
Silver	5.0	.002K	.002J	.002K	.002J	.002K	.002K
Endrin	.02	.000008K	.000008K	.000008K	.000008K	.000008k	.000008
Lindane	.4	.00003	.00004	.00023	.00066	.00002	.000003
Methoxychlor	10.0	.00038	.00008K	.00328	.01100	.00054	.00059
2,4,-D	10.0	.0003K	.0003K	.0073	.0080	.0003K	.0003K
Silvex	1.0	.00007K	.00007K	.00007K	.00007K	.00007K	.00007K
Toxophene	0.5	.00035K	.00035K	.00035K	.00035K	.00035K	.00035

K = Actual value less than value given

J = Estimated value

65184, 65185, 65186 - Ash Pile

65187 - Soil by Ash Pile

65191 - Subsurface Tank Near Incinerator

65192 - Soil by Subsurface Tank Near Incinerator

Table III

Results of Metals Analysis on Samples

Parameter	65184 mg/kg	65185 mg/kg	65186 mg/kg	65187 mg/kg	65192 mg/kg
Silver	3K	3J	3K	3K	3K
Arsenic	7.5	6.6	3J	23	7.0
Beryllium	1J	1K	1K	1K	1K
Cadmium	160	120	84	59	13 ✓
Chromium	2900	1800	3300	650	1200 ✓
Copper	3300	2400	1100	1000	1100 ✓
Mercury	12	.5J	21	27	7.4
Lead	21,000	13,000	17,000	4500	2700 ✓
Nickel	250	250	79	99	850
Antimony	.8K	.8K	.8K	.8K	.8K
Selenium	.9J	5.1	.8K	4.2	2J
Thallium	.8K	.8K	.8K	.8K	.8K
Zinc	3400	3800	3500	2300	1900

K = Actual value less than value given
 J = Estimated value

65184, 65185, 65186 - Ash Pile

65187 - Soil by Ash Pile

65192 - Soil by Subsurface Tank Near Incinerator

Table IV

Results of Organics Analysis on Samples

Organic Compounds	65188 ug/l	65189 ug/l	65191 ug/l
Fluoranthene		90J	
Isophoronnne	1800J		1300
Nephthalene	1500J	1400	
Bis(2-ethylhexyl) phthalate	13,000	6900	
Butyl benzly phthalate		1100	
Di-n-butyl phthalate	3800J	1800	
Fluorene		70J	
Phenanthrene	2500J	290	
Pyrene		60J	
Phenol			110J
Toluene			4900

J = Estimated value

K = Actual value less than value given

65188 - Oil Separator

65189 - 5,000 Gallon Tank

65191 - Subsurface Tank by Incinerator

Table Va

Results of Organic Analysis on Samples

Soil not
holding
any

Organic Compounds	65184 ug/kg	65185 ug/kg	65186 ug/kg	65187 ug/kg	65190 ug/kg	65192 ug/kg
Acenaphthene			4300J	2500J	1400J	
1,2,4-Trichlorobenzene			8400	1200J		
1,2-Dichlorobenzene		730				
1,4-Dichlorobenzene		240				
1,2-Diphenylhydrazine	3200J		11000	1900J	1500J	2300J
Fluoranthene	2600J	280	15000	12000	12000	3700J
Isophorane	92000	22000	250000	27000		25000
Naphthalene	110000	8300	180000	18000	22000	12000
N-nitrosodiphenylamine	20000	120	1700J	2000J	4800J	780J
Bis(2-ethylhexyl)phthalate	800000	11000	1200000	990000	1200000	210000
Butyl benzyl phthalate	370000	2100	1200000	210000	400000	200000
Di-n-butyl phthalate	450000	2100	330000	110000	280000	280000
Di-n-octyl phthalate	5700J	1200	7200	3800J		770J
Diethylphthalate	9700	400				
Dimethylphthalate	24000					
Acenaphthylene	1200J	160		1800J		3100J
Anthracene	2300J	100	8000	3000J		1400J
Fluorene	2400J	57K	7400	3200J	3300J	1600J
Phenanthrene	12000	900	32000	17000	28000	7000
Pyrene	3600J	260	14000	15000	9000	4700J
Phenol	80000	170	46000	5800J		4700J

J = Estimated value

K = Actual value less than value given

Table Vb

Results of Organic Analysis on Samples

Organic Compounds	65184 ug/kg/	65185 ug/kg	65186 ug/kg	65187 ug/kg	65190 ug/kg	65192 ug/kg
Benzene	160	130	480		15	
1,2-Dichloroethane	46		88	36		
1,1,1-Trichloroethane	58	380	7000	350	15	
1,1-Dichloroethane	320	67	500	16		
1,1,2-Trichloroethane	1300		5000	660		
Chloroform	47	120	160	23		
1,1-dichloroethylene	68		400	13		
1,2-dichloropropane		18K				
Ethylbenzene	3200	1900	65000	120	580	
Methylene Chloride	10000	4600	8700	1500		
Tetrachloroethylene	1800	1300	2600	460	100	
Toluene	28000	11000	320000	630	1700	
Trichloroethylene	2200	1200	8100	290	19	
Vinyl Chloride	1600		150			

J = Estimated value

K = Actual value less than value given

65184, 65185, 65186 - Ash pile

65187 - Soil by Ash Pile

65190 - Soil by 5,000 Gallon Tank

65192 - Soil by Subsurface Tank Near Incinerator

Table VI

Results for PCB Analysis

PCB	#65187
Aroclor 1248	67.2 mg/kg
Aroclor 1254	117.5 mg/kg

65187 - Composite soil sample by ash pile

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Appendix I - Photograph Descriptions

- Photo #1 - Under ground 5,000 gallon holding/settling tank
- Photo #2 - Oil-water separator trench
- Photo #3 - Incinerator area
- Photo #4 - Subsurface tank near incinerator (facing incinerator - left tank)
- Photo #5 - Subsurface tank near incinerator (facing incinerator - right tank)
- Photo #6 - Area adjacent to incinerator
- Photo #7 - Incinerator ash waste pile
- Photo #8 - Incinerator ash waste pile
- Photo #9 - Incinerator ash waste pile
- Photo #10 - Incinerator ash waste pile



Photo #1



Photo #2

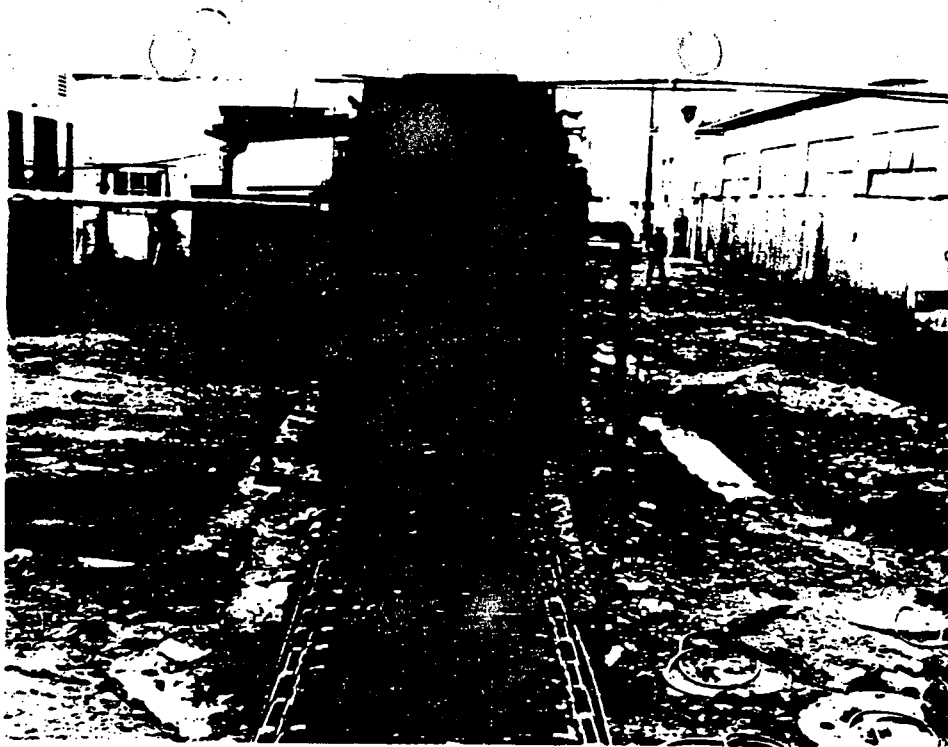


Photo #3



Photo #4

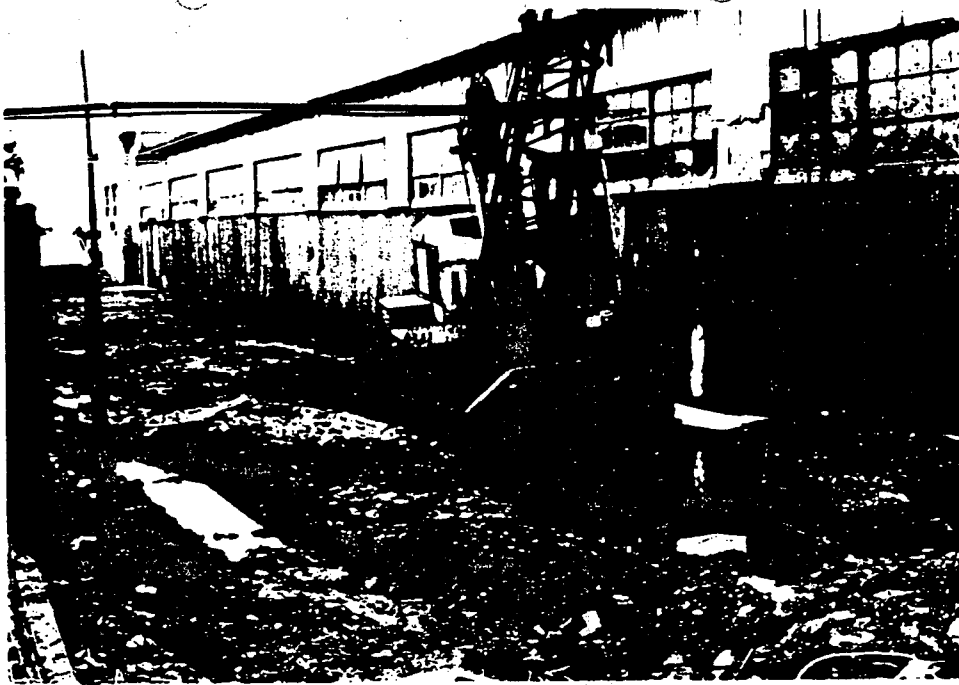


Photo #5



Photo #6



Photo #7



Photo #8

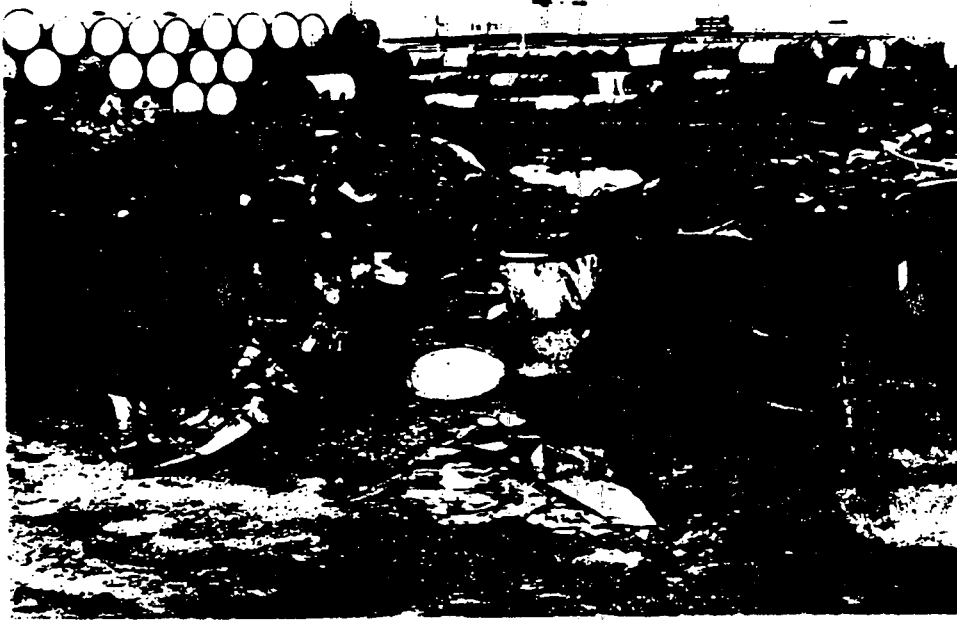


Photo #9

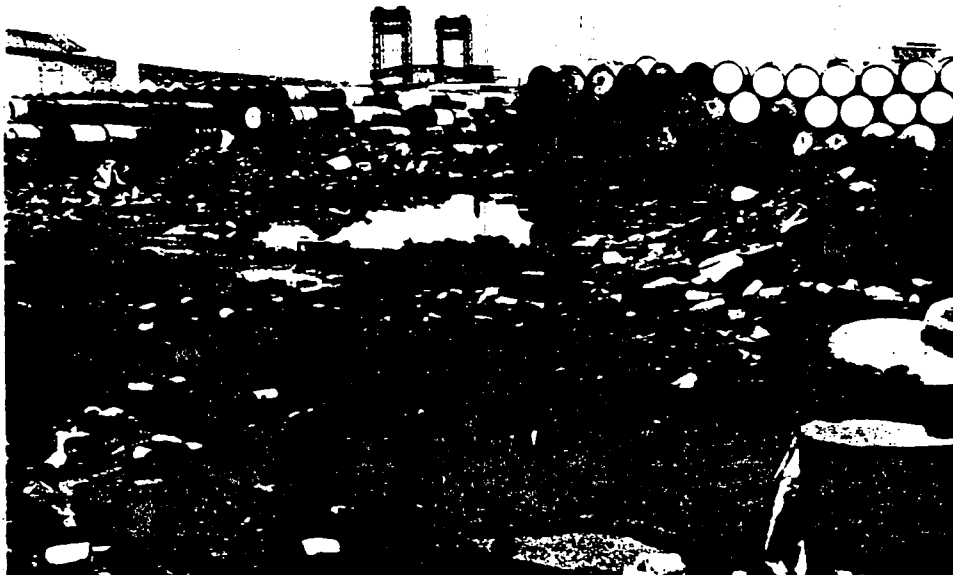


Photo #10

CHAIN OF CUSTODY RECORD

Appendix II

RECEIPT OF SAMPLES

ENVIRONMENTAL PROTECTION AGENCY - REGION II

SURVEILLANCE & ANALYSIS DIVISION

EDISON, NEW JERSEY 08817

Name of Unit and Address Bayonne Barrel + Drum 150 Raymond Blvd Newark, N.J.		NT# 00-7871401 2/17/84	
Sample Number	Number of Containers	Description of Samples	Corresponding #
65184	4	NVOA, PA, EP Toxicity	1
65185	4	NVOA, PA, EP Toxicity	2
65186	4	NVOA, PA, EP Toxicity	3
65187	4	NVOA, PA, EP TOXICITY	4
65188	6	NVOA, PA, EP TOXICITY, Ignitability, Corrosivity	5
65189	6	NVOA, PA, EP TOXICITY, Ignitability, Corrosivity	6
65190	3	NVOA, PA	7
65191	6	NVOA, PA, EP TOXICITY, Ignitability, Corrosivity	8
65192	4	NVOA, EP TOXICITY	9
<p>Lon D. Smith - U.S. EPA Frank J. Angella</p>			
Person Assuming Responsibility for Sample:			Time Date
Sample Number	Relinquished By:	Received By:	Time Date Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time Date Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time Date Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time Date Reason for Change of Custody